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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,488	11/30/2004	Michael Steen Degermann	U 015507-5	2856
140	7590	08/15/2006	EXAMINER	
LADAS & PARRY 26 WEST 61ST STREET NEW YORK, NY 10023			THOMAS, ALEXANDER S	
			ART UNIT	PAPER NUMBER

1772

DATE MAILED: 08/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/516,488

Applicant(s)

DEGERMANN, MICHAEL STEEN

Examiner

Alexander Thomas

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/30/04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings were received on 2/27/06. These drawings are approved.

Specification

2. The disclosure is objected to because of the following informalities: on pages 3 and 4 reference is made to specific claims this is improper because at some point in the prosecution these claims may be deleted or amended; and a brief description of Figures 4a and 4b must be provided.

Appropriate correction is required.

Claim Objections

3. Claims 1, 7 and 10 are objected to because of the following informalities: the meaning of the term "semi-rigid 10" in claim 7 is not understood, it appears the numeral 10 should be deleted; and in claim 10 the spelling of "cyclopentan" needs to be corrected. Also, in claim 1 it is not clear whether the numerical ratios are "blowing agent to additive gas" or "additive gas to blowing agent". Appropriate correction is required.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

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5. Claim 12 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claim appears to be directed to a process, however no process steps are positively recited.

Claim Rejections - 35 USC § 112

6. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim is directed to a use of a product, however, no process steps have been set forth.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-7 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's acknowledged state of the art in view of Rotermund et al 5,965,231. The primary reference discloses that it is known in the art to form thermally insulated containers for the transport of cargo from panels comprising metal outers layer and a blow in place intermediate polyurethane foam layer; see page 1, lines 9-20 of the instant specification. The primary reference also acknowledges that when closed-cell rigid

polyurethane foam is used as insulation that it is known to use a mixture of blowing agent and a gas additive such as argon in the cells of the foam; see page 1, lines 24-29 of the instant specification. However, the primary reference does not teach the claimed thickness of the metal layers, the claimed thermal conductivity or the ratio of blowing agent to additive gas. It would have been obvious to one of ordinary skill in the art to select any thickness for the metal layers in the prior art product depending on the desired structural properties for a particular end use. The secondary reference discloses using gas mixtures to fill the cells of rigid polyurethane foam wherein the thermal conductivity of the gas is lower than that of ambient air to provide better insulation properties to the foam; see column 1, lines 25-61. It would have been obvious to one of ordinary skill in the art to use a mixture of gases as the blowing agents/additive gas as taught by the secondary reference in the foam layer of the product of the primary reference in order to provide improved insulation properties to the laminate. The secondary reference also discloses using a mixture of cyclopentane and argon or cyclopentane, argon and carbon dioxide as the gas mixture; see column 3, lines 28-60. It would have been obvious to one of ordinary skill in the art to use such a mixture of gases as taught in the secondary reference to fill the cells of the foam in the primary reference in order to provide strong insulating action. Regarding the ratio of blowing agent to additive gas in claim 1, the secondary reference suggests a wide range of ratios including one wherein the blowing agent may be present in a very high quantity as compared to the additive gases; see column 3, lines 50-57. It would have been obvious to one of ordinary skill in the art to adjust the ratio of blowing agent to additive

gases to any amount, including the instantly claimed ratio, in order to optimize the insulative properties for a particular end use absent a showing of unexpected results attributable to the claimed ratio.

9. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's acknowledged state of the art in view of Rotermund et al 5,965,231 as applied to claims 1-7, 9 and 10 above, and further in view of Albouy et al 6,624,208. Albouy et al disclose that the instantly claimed cell size is within a well-known cell size range for polymers expanded with a blowing agent and used for insulation; see column 1, lines 14-33. It would have been obvious to one of ordinary skill in the art to adjust the size of the pores in the foam of the primary reference to .25mm or less to provide optimum insulating properties in the absence of unexpected results attributable to the claimed size.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Thomas whose telephone number is 571-272-1502. The examiner can normally be reached on 6:30-4:00 M-THUR.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Alexander S. Thomas". The signature is fluid and cursive, with the first name "Alexander" being more prominent than the last name "Thomas".

ALEXANDER S. THOMAS
PRIMARY EXAMINER